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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,545

02/08/2006

Ugenio Ferreira Da Silva Neto

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12/26/2008

BACON & THOMAS, PLLC

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ALEXANDRIA, VA 22314-1176

EXAMINER

WRIGHT, BRYAN F

ART UNIT

PAPER NUMBER

2431

MAIL DATE

DELIVERY MODE

12/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/518,545

**Applicant(s)**DA SILVA NETO, UGENIO  
FERREIRA**Examiner**

BRYAN WRIGHT

**Art Unit**

2431

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**FINAL ACTION**

1. Amendment 10/02/08 has been entered.
2. Claim 12 has been amended. Claims 12- 22 are pending.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12 -15 and 17- 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen (US Patent Publication No. 2003/0208290) in view of Galasso (US Patent No. 6,598,165).
4. As to claim 12, Gillen teaches a method for providing protection from unauthorized access to a field device (i.e., microcontroller) in process automation technology (i.e., ... teaches a microcontroller whose control program is protected from being read out [par. 12]) , whereby the field device (i.e., microcontroller) is connected over a data bus with a control unit (i.e., teaches bus connection interface [24, fig. 1]), the field device (i.e., microcontroller) comprises at least one function block with defined communications interfaces (i.e., ... teaches a communication interface [22, fig. 1]),

whereby the set parameters of the function block (i.e., control program [par. 28]) on the field device determine the functionality of the field device and allow the execution of complicated control procedures while interacting with other field devices and allow the execution of complicated control procedures while interacting with other field devices connected to the data bus (i.e., ...teaches a control program for controlling execution of microcontroller [par. 28]) , the method comprising the steps of:

storing in the field device (i.e., microcontroller) or in the function block a security program performing an authorization examination (i.e., interrogation) in the case of accessing the parameters of the function block or the field device over the data bus and permitting a change (i.e., activating basic function) in the parameters of the function block or the field device (i.e., microcontroller) or a replacement of the function block only in the case when the authorization is available (i.e., ...teaches an authorization examination [par. 33] consisting of an identifier Ki of the software protection device 26.sub.Vi is interrogated by the control unit [par. 34]. ... further teaches If the value X2 transmitted by the software protection device 26.sub.Vi to the control unit 16 does not correspond to the value X1, then only certain basic functionalities are activated [par. 38]).

Gillen does not teach: storing in the field device or function block a security program. However, these features are well known in the art and would have been an obvious modification of the system disclosed by Gillen as introduced by Galasso. Galasso discloses:

storing in the field device or function block a security program (to provide the capability to store a security program Galasso provides security firmware for which prevents the modifying of content base on proper authorization [col. 1, lines 50-57]).

Therefore, given the teachings of Galasso, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Gillen by employing the well known features of storing a security programs in a field device disclose above by Galasso, for which field device access authorization will be enhanced [col. 1, lines 50-57].

5. As to claims 13 and 14 the system disclosed by Galasso shows substantial features of the claimed invention (discussed in the paragraph above), it fails to disclose:

A method where: the security program is part of a function block (claim 13).

A method where: the security program is part of firmware stored in the field device (i.e., microprocessor) (claim 14).

However, these features are well known in the art and would have been an obvious modification of the system disclosed by Gillen as introduced by Galasso. Galasso discloses:

A method where: the security program is part of a function block (claim 13) (to include security protection as part of a firmware stored on a field device [fig. 1]).

A method where: the security program is part of firmware stored in the field device (i.e., microprocessor) (claim 14) (to store security firmware in field devices [col. 1, lines 50-57]).

Therefore, given the teachings of Galasso, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Gillen by employing the well known features of storing a security programs in a field device disclose above by Galasso, for which field device access authorization will be enhanced [col. 1, lines 50-57].

6. As to claim 15, Gillen teaches a method where the security program includes a security key (i.e., identifier), which is stored in the field device during configuration of the field device (i.e., microcontroller) [par. 36].

7. As to claim 17, Gillen teaches a method where the security key is created during installation of the field device [par. 7].

8. As to claim 18, Gillen teaches a method where the security key (i.e., identifier) is provided by the field device [par. 39].

9. As to claim 19, Gillen teaches a method where: the security key (i.e., identifier) is regularly renewed [par. 38].

10. As to claim 20, teaches a method where: the security key (i.e., identifier) is renewed hourly [par. 38].

11. As to claim 21, Gillen teaches a method where: the security key (i.e., ...identifier) is stored only in the field device [par. 36].

12. As to claim 22, Gillen teaches a method where: the field devices (e.g., EEPROM) are sensors, actuators, controllers, PLCs or gateways [par. 25].

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen in view of Galasso, as applied to claim 12 above, further in view of Moyer (US Patent No. 7,266,848 and Moyer hereinafter).

14. As to claim 16 the system disclosed by Galasso shows substantial features of the claimed invention (discussed in the paragraph above), it fails to disclose: A method where: the security key is an at least 128-bit code.

However, these features are well known in the art and would have been an obvious modification of the system disclosed by Gillen in view of Galasso as introduced by Moyer. Moyer discloses:

A method where: the security key is an at least 128-bit code (to provide a variable length security key capability [col. 3, lines 23-26]).

Therefore, given the teachings of Moyer, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Gillen in view of Galasso by employing the well known features of variable length security key above by Moyer, for which field device access authorization will be enhanced [col. 3, lines 23-26].

### ***Response to Arguments***

Applicant's arguments with respect to claims 12-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date



of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN WRIGHT whose telephone number is (571)270-3826. The examiner can normally be reached on 8:30 am - 5:30 pm Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRYAN WRIGHT/  
Examiner, Art Unit 2431

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435